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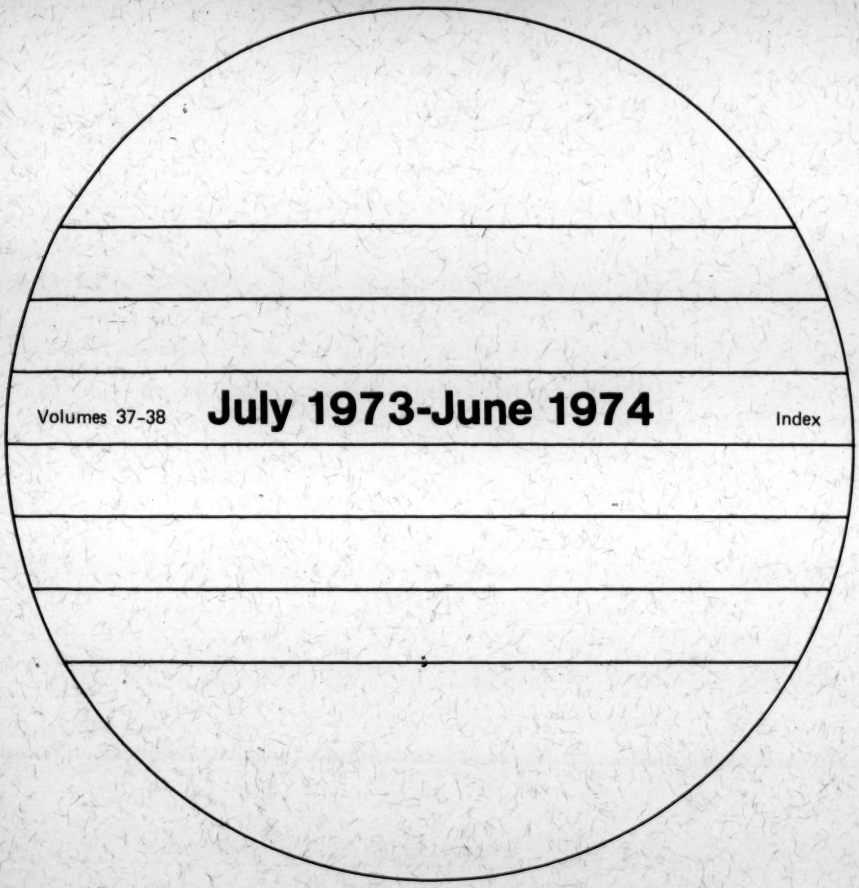

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57.20.Q Critical point phenomena

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62.20.D General theory, scattering mechanisms

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64.40.P Critical currents and flux pinning ac behavior

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65. MAGNETIC PROPERTIES AND MATERIALS

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65.40.D Spin waves

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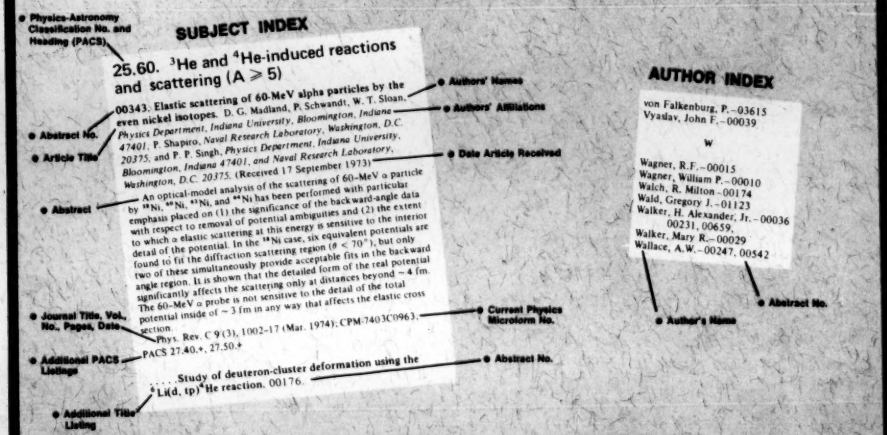
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Abstract
An optical-model analysis of the scattering of 60-MeV α particle by 58Ni, 60Ni, 62Ni, and 64Ni has been performed with particular emphasis placed on (1) the significance of the backward-angle data with respect to removal of potential ambiguities and (2) the extent to which a elastic scattering at this energy is sensitive to the interior detail of the potential. In the 58Ni case, six equivalent potentials are found to fit the diffraction scattering region (θ < 70°), but only two of these simultaneously provide acceptable fits in the backward angle region. It is shown that the detailed form of the real potential significantly affects the scattering only at distances beyond ~ 4 fm. The 60-MeV α probe is not sensitive to the detail of the total potential inside of ~ 3 fm in any way that affects the elastic cross section.
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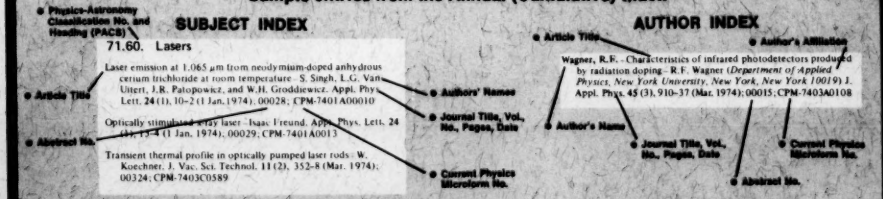
Physics-Astronomy Classification No. and Heading (PACS)
SUBJECT INDEX
71.60. Lasers
Laser emission at 1.065 μm from neodymium-doped anhydrous cerium trichloride at room temperature. S. Singh, L.G. Van Uitert, J.R. Pasopowicz, and W.H. Grodkiewicz. Appl. Phys. Lett. 24 (1), 10–2 (1 Jan. 1974). 00028; CPM-7401A00010
Article Title
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Optically stimulated ruby laser. Isaac Freund. Appl. Phys. Lett. 24 (1), 13–4 (1 Jan. 1974). 00029; CPM-7401A0013
Abstract No.
Journal Title, Vol., No., Pages, Date
Transient thermal profile in optically pumped laser rods. W. Koechner. J. Vac. Sci. Technol. 11 (2), 352–8 (Mar. 1974). 00324; CPM-7403C0589
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AUTHOR INDEX
Article Title
Author's Affiliation
Wagner, R.F. – Characteristics of infrared photodetectors produced by radiation doping – R.F. Wagner (Department of Applied Physics, New York University, New York, New York 10019) J. Appl. Phys. 45 (3), 910–37 (Mar. 1974); 00015; CPM-7403A0108
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